

92. (New) A method for manufacturing a fiber web having a three-dimensional surface structure and a strength, comprising the steps of:

pre-imprinting the fiber web at a dry content of less than 25% with an imprinting band using a first pressure field; and

5 pressing the fiber web onto said imprinting band using a second pressure field, said pressing step further dewatering and drying the fiber web fixing the three-dimensional surface structure and the strength.

93. (New) The method of claim 92, wherein said method is carried out using an imprinting screen as said imprinting band.

94. (New) The method of claim 92, wherein said method is carried out using an imprinting membrane as said imprinting band.

95. (New) The method of claim 92, wherein said pre-imprinting step occurs subsequent to a forming region relative to a running direction.

96. (New) The method of claim 92, wherein said method includes forming the fiber web on said imprinting band.

97. (New) The method of claim 92, wherein said pre-imprinting step further includes transferring the fiber web onto said imprinting band.

98. (New) The method of claim 92, wherein said method is carried out using said imprinting band for said pre-imprinting step and for said fixing in said pressing step.

99. (New) The method of claim 92, wherein at least one of said pre-imprinting step and said pressing step produce at least one of said first pressure field and said second pressure field using at least one suction element, said at least one suction element located at a side of said imprinting band opposite the fiber web, said at least one suction element motivating the fiber
5 web into an imprinting band surface structure.

100. (New) The method of claim 99, wherein said method is carried out using at least one wet suction box as said at least one suction element.

101. (New) The method of claim 92, wherein said pressing step includes gently pressing the fiber web in said second pressure field.

102. (New) The method of claim 101, wherein said pressing step includes gently pressing the fiber web over a length extended in a running direction.

103. (New) The method of claim 99, wherein said pressing step further includes producing said second pressure field in a press nip.

104. (New) The method of claim 103, wherein said pressing step is carried out using a dryer cylinder and an opposing element producing said press nip therebetween, the fiber web

guided through said press nip, the fiber web having a first side and a second side, said first side contacting said dryer cylinder and said second side opposite said first side and contacting said
5 imprinting band.

105. (New) The method of claim 104, wherein said method is carried out using a Yankee cylinder as said dryer cylinder.

106. (New) The method of claim 104, wherein said pressing step further includes a press shoe unit as said opposing element, said press shoe interacting with said dryer cylinder and including a flexible band guided with a press shoe in a region of said press nip.

107. (New) The method of claim 106, wherein said pressing step is carried out using a pressing roll including a flexible roll jacket as said press shoe unit.

108. (New) The method of claim 104, wherein said pressing step is carried out using one of a pressing roll and a suction roll as said opposing element.

109. (New) The method of claim 102, further including at least one of the steps of creping the fiber web and winding the fiber web following said pressing step.

110. (New) The method of claim 92, wherein at least one of said pre-imprinting step and said pressing step produces said dry content $< 25\%$.

111. (New) The method of claim 110, wherein said dry content is $< 15\%$.

112. (New) The method of claim 110, wherein said dry content is $< 10\%$.

113. (New) The method of claim 103, wherein said method is carried out using a suction device located in a position respective to a running direction between said suction element and said press nip, with the fiber web and said imprinting band guided together over said suction device and through said press nip.

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114. (New) The method of claim 113, wherein said method is carried out using said suction device with a curved surface and both the fiber web and said imprinting band are guided over said curved surface.

115. (New) The method of claim 114, wherein said method is carried out using a suction roll as said suction device.

116. (New) The method of claim 113, wherein said method is carried out using a hood providing a positive pressure and associated with said suction device to support an under pressure action of said suction device.

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117. (New) The method of claim 106, wherein said method is carried out using a length in a running direction of said press nip, including said drying cylinder and said press shoe, said length being greater than approximately 80 mm and said press shoe exhibiting over said length a

maximum pressing pressure less than or equal to approximately 2.5 MPa.

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118. (New) The method of claim 95, wherein said method is carried out using at least one dewatering screen with a zonally different screen permeability used in said forming region.

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119. (New) The method of claim 118, wherein said method is carried out using a former with a circulating first dewatering band and a circulating second dewatering band, said first dewatering band and said second dewatering band having a tangential coincidence, said tangential coincidence forming a pulp run-in gap, said first dewatering band and said second dewatering band both guided over said forming element, wherein said first dewatering band is an outer band absent of contact with said forming element and said second dewatering band is an inner band in contact with said forming element, at least one of said outer band and said inner band is said dewatering screen.

120. (New) The method of claim 119, wherein said method is carried out using a forming roll as said forming element.

121. (New) The method of claim 119, wherein said method is carried out using said inner band as said imprinting band and said outer band as said dewatering screen.

122. (New) The method of claim 121, wherein said method is carried out transferring the fiber web from said inner band to an imprinting band.

123. (New) The method of claim 103, wherein said pressing step further includes guiding said imprinting band through said press nip, said imprinting band having a first areal proportion of one of a plurality of raised zones and a plurality of closed zones, said imprinting band having a second areal proportion of one of a plurality of recessed zones and a plurality of
5 holes, said first areal proportion less than said second areal proportion resulting in a smaller areal proportion of the fiber web being pressed in said press nip.

124. (New) The method of claim 123, wherein pressing step is carried out using one of an imprinting screen and an imprinting membrane as said imprinting band.

125. (New) The method of claim 123, wherein said pressing step is carried out using said first areal proportion less than or equal to 40%.

126. (New) The method of claim 123, wherein said pressing step is carried out using said first areal proportion is between approximately 20% and 30%.

127. (New) The method of claim 123, wherein said pressing step is carried out using said first areal proportion is approximately 25%.

128. (New) The method of claim 123, wherein said pressing step is carried out using said plurality of raised zones and said plurality of recessed zones resulting from a plurality of offsets, each said offset resulting from an intersection in a screen fabric of a pick and an end.

129. (New) The method of claim 92, wherein said method is carried out using at least one felt with a foamed layer for dewatering the fiber web.

130. (New) The method of claim 129, wherein said method is carried out using said foamed layer with a plurality of pores, each said pore having a maximum cross-section between approximately 3 μm and 6 μm .

131. (New) The method of claim 92, wherein said method is carried out using a spectra membrane for dewatering the fiber web.

132. (New) The method of claim 131, wherein said method is carried out using a conventional screen used in combination with said spectra membrane.

133. (New) The method of claim 131, wherein said method is carried out using a woven screen as said conventional screen.

134. (New) The method of claim 92, wherein said method is carried out using an anti-
5 rewetting membrane for dewatering the fiber web.

135. (New) The method of claim 134, wherein said method is carried out using a conventional screen used in combination with said anti-rewetting membrane.

136. (New) The method of claim 135, wherein said method is carried out using a woven

screen as said conventional screen.

137. (New) The method of claim 134, wherein said method is carried out using said anti-rewetting membrane in the absence of an additional screen.

138. (New) The method of claim 92, wherein said method is carried out using a clothing guided together with said imprinting band, with the fiber web interposed therebetween, about at least one suction roll.

139. (New) The method of claim 138, wherein said clothing is one of a screen, a felt with a foamed layer and a spectra membrane.

140. (New) The method of claim 139, wherein said clothing is in contact with at least one said suction roll.

141. (New) The method of claim 140, wherein said method is carried out using said clothing combined with at least one of a conventional screen and an anti-rewetting membrane.

142. (New) The method of claim 141, wherein said method is carried out using a woven screen as said conventional screen.

143. (New) The method of claim 138, wherein said method is carried out using said clothing in contact with at least one said suction roll.

144. (New) The method of claim 143, wherein said method is carried out using said clothing combined with at least one of a conventional screen and an anti-rewetting membrane.

145. (New) The method of claim 144, wherein said method is carried out using a woven screen as a conventional screen.

146. (New) The method of claim 138, wherein said method is carried out using said clothing combined with at least one of a conventional screen and an anti-rewetting membrane.

147. (New) The method of claim 146, wherein said method is carried out using a woven screen as said conventional screen.

148. (New) The method of claim 138, wherein said method is carried out using said clothing, said clothing is one of a screen, a felt with a foamed layer and a spectra membrane.

149. (New) The method of claim 148, wherein said method is carried out using said clothing combined with at least one of a conventional screen and an anti-rewetting membrane.

150. (New) The method of claim 149, wherein said method is carried out using a woven screen as a conventional screen.

151. (New) The method of claim 138, wherein said method is carried out with at least

one said suction roll having a diameter of between approximately 2 m and 3 m.

152. (New) The method of claim 151, wherein said method is carried out with at least one said suction roll comprising a plurality of said suction rolls.

153. (New) The method of claim 152, wherein said suction roll diameter is approximately 2 m.

154. (New) The method of claim 138, further including the step of applying a vacuum to at least one said suction roll.

155. (New) The method of claim 138, wherein said method is carried out using one of a siphon extractor and centrifugal force combined with at least one said suction roll for dewatering the fiber web.

156. (New) The method of claim 140, wherein said method is carried out using an air knife combined with at least one said suction roll for dewatering the fiber web.

157. (New) The method of claim 92, wherein said method is carried out using a plurality of rolls arranged in parallel bounding a pressure space pressurized by a compressed gas for driving out water from the fiber web, the fiber web and said imprinting band guided together through said pressure space at least once.

158. (New) The method of claim 157, wherein said method is carried out using a plurality of membranes, the fiber web guided together with and positioned between said plurality of membranes.

159. (New) The method of claim 158, wherein said plurality of membranes include an air distribution membrane and an anti-rewetting membrane.

160. (New) The method of claim 92, wherein said method is carried out using said imprinting band with at least one of a thickness between approximately 1 mm and 3 mm and an open area greater than approximately 50%.

161. (New) The method of claim 160, wherein said method is carried out using said open area greater than approximately 60%.

162. (New) The method of claim 160, wherein said open area is between approximately 70% and 75%.

163. (New) A method for dewatering a fiber web, comprising the steps of:

bounding a pressure space with at least four rolls;

pressurizing said pressure space with a compressed gas;

interposing the fiber web between a plurality of membranes; and

5 guiding the fiber web, said plurality of membranes and an imprinting band through said pressure space at least once.

164. (New) The method of claim 163, wherein said plurality of membranes include an air distribution membrane and an anti-rewetting membrane.

165. (New) An apparatus for manufacturing a fiber web having a three-dimensional surface structure and a strength, comprising:

an imprinting band;

a first pressure field pressing the fiber web onto said imprinting band, said first pressure
5 field producing the fiber web with a dry content of < 25%; and

a second pressure field pressing the fiber web onto said imprinting band, said second pressure field subsequent to said first pressure field in a running direction, said second pressure field further dewateres and dries the fiber web fixing the three dimensional surface structure and strength.

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166. (New) The apparatus of claim 165, wherein said imprinting band is an imprinting screen.

167. (New) The apparatus of claim 165, wherein said imprinting band is an imprinting membrane.

168. (New) The apparatus of claim 166, further including a forming region, wherein said first pressure field is subsequent to said forming region relative to said running direction.

169. (New) The apparatus of claim 165, wherein the fiber web is formed on said imprinting band.

170. (New) The apparatus of claim 165, further including transferring the fiber web onto said imprinting band at said first pressure field.

171. (New) The apparatus of claim 165, wherein said imprinting band is used for a pre-imprinting and a fixing of the three-dimensional surface structure.

172. (New) The apparatus of claim 165, wherein at least one of said first pressure field and said second pressure field is produced by an at least one suction element located at a side of said imprinting band opposite the fiber web, said at least one suction element motivating the fiber web into an imprinting band surface structure.

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173. (New) The apparatus of claim 172, wherein said at least one suction element is a wet suction box.

174. (New) The apparatus of claim 165, wherein the fiber web is pressed gently in said second pressure field.

175. (New) The apparatus of claim 174, wherein the fiber web is pressed gently over a length extended in said running direction.

176. (New) The apparatus of claim 165, wherein a press nip produces said second pressure field.

177. (New) The apparatus of claim 176, wherein said press nip is produced between a dryer cylinder and an opposing element, the fiber web guided through said press nip, the fiber web having a first side and a second side, said first side contacting said dryer cylinder, and said second side opposite said first side and contacting said imprinting band.

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178. (New) The apparatus of claim 177, wherein said dryer cylinder is a Yankee cylinder.

179. (New) The apparatus of claim 177, wherein said opposing element is a shoe press unit, said shoe press unit interacts with said dryer cylinder and further including a flexible band guided with a press shoe in a region of said press nip.

180. (New) The apparatus of claim 179, wherein said press shoe unit is a pressing roll including a flexible roll jacket.

181. (New) The apparatus of claim 177, wherein said opposing element is a suction press roll, with at least one of a soft liner and a low pressing pressure, interacting with said dryer cylinder.

182. (New) The apparatus of claim 177, wherein said opposing element is one of a

pressing roll and a suction roll, interacting with said dryer cylinder.

183. (New) The apparatus of claim 177, further including means for at least one of drying the fiber web on said dryer cylinder, creping the fiber web and subsequently winding the fiber web.

184. (New) The apparatus of claim 165, wherein at least one of said first pressure field and said second pressure field produces the fiber web with a dry content of $< 25\%$.

185. (New) The apparatus of claim 184, wherein said dry content is $< 15\%$.

186. (New) The apparatus of claim 184, wherein said dry content is $< 10\%$.

187. (New) The apparatus of claim 176, further including a suction device located in a position respective to said running direction between said suction element and said press nip, with said fiber web and said imprinting band guided together over said suction device and through said press nip.

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188. (New) The apparatus of claim 187, wherein said suction device has a curved surface and both the fiber web and said imprinting band are guided over said curved surface.

189. (New) The apparatus of claim 188, wherein said suction device is a suction roll.

190. (New) The apparatus of claim 187, further including a hood providing a positive pressure and associated with said suction device to support an underpressure action of said suction device.

191. (New) The apparatus of claim 179, wherein a length in said running direction of said press nip, including said dryer cylinder and said press shoe, is greater than approximately 80 mm and said press shoe exhibits over said length a maximum pressing pressure less than or equal to approximately 2.5 MPa.

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192. (New) The apparatus of claim 168, further including at least one dewatering screen with a zonally different screen permeability used in said forming region

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193. (New) The apparatus of claim 192, further including a former with a forming element, a circulating first dewatering band and a circulating second dewatering band, said first dewatering band and said second dewatering band having a tangential coincidence, said tangential coincidence forming a pulp run-in gap, said first dewatering band and said second dewatering band both guided over said forming element, wherein said first dewatering band is an outer band absent of contact with said forming element and said second dewatering band is an inner band in contact with said forming element, at least one of said outer band and said inner band is said dewatering screen.

194. (New) The apparatus of claim 193, wherein said forming element is a forming roll.

195. (New) The apparatus of claim 193, wherein said inner band is said imprinting band and said outer band is said dewatering screen.

196. (New) The apparatus of claim 195, wherein the fiber web is transferred from said inner band to an imprinting band.

197. (New) The apparatus of claim 176, wherein said imprinting band is guided through said press nip, said imprinting band having a first areal proportion of one of a plurality of raised zones and a plurality of closed zones, said imprinting band having a second areal proportion of one of a plurality of recessed zones and a plurality of holes, said first areal proportion less than
5 said second areal proportion resulting in a smaller areal proportion of the fiber web being pressed in said press nip.

198. (New) The apparatus of claim 197, wherein said imprinting band is one of an imprinting screen and an imprinting membrane.

199. (New) The apparatus of claim 197, wherein said first areal proportion is less than or equal to 40%.

200. (New) The apparatus of claim 197, wherein said first areal proportion is between approximately 20% and 30%.

201. (New) The apparatus of claim 197, wherein said first areal proportion is

approximately 25%.

202. (New) The apparatus of claim 197, wherein said plurality of raised zones and said plurality of recessed zones resulting from a plurality of offsets, each said offset resulting from an intersection in a screen fabric of a pick and an end.

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203. (New) The apparatus of claim 165, further including at least one felt with a foamed layer for dewatering the fiber web.

204. (New) The apparatus of claim 203, wherein said foamed layer has a plurality of pores, each said pore having a maximum cross-section between approximately 3 μm and 6 μm .

205. (New) The apparatus of claim 165, further including a spectra membrane, the fiber web positioned between said spectra membrane and said imprinting band for a length of said imprinting band in said running direction, said spectra membrane for dewatering the fiber web.

206. (New) The apparatus of claim 205, further including a conventional screen used in combination with said spectra membrane.

207. (New) The apparatus of claim 206, wherein said conventional screen is a woven screen.

208. (New) The apparatus of claim 165, further including an anti-rewetting membrane,

the fiber web positioned between said anti-rewetting membrane and said imprinting band for a length of said imprinting band in said running direction, said anti-rewetting membrane for dewatering the fiber web.

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209. (New) The apparatus of claim 208, further including a conventional screen used in combination with said anti-rewetting membrane.

210. (New) The apparatus of claim 209, wherein said conventional screen is a woven screen.

211. (New) The apparatus of claim 208, wherein said anti-rewetting membrane is used in the absence of an additional screen.

212. (New) The apparatus of claim 165, further including a clothing and at least one suction roll, said clothing guided together with said imprinting band, with the fiber web interposed therebetween, about at least one said suction roll.

213. (New) The apparatus of claim 212, wherein said clothing is one of a screen, a felt with a foamed layer and a spectra membrane.

214. (New) The apparatus of claim 213, wherein said clothing is in contact with at least
5 one said suction roll.

215. (New) The apparatus of claim 214, wherein said clothing is combined with at least one of a conventional screen and an anti-rewetting membrane.

216. (New) The apparatus of claim 215, wherein said conventional screen is a woven screen.

217. (New) The apparatus of claim 212, wherein said clothing is in contact with at least one said suction roll.

218. (New) The apparatus of claim 217, wherein said clothing is combined with at least one of a conventional screen and an anti-rewetting membrane.

219. (New) The apparatus of claim 218, wherein said conventional screen is a woven screen.

220. (New) The apparatus of claim 212, wherein said clothing is combined with at least one of a conventional screen and an anti-rewetting membrane.

221. (New) The apparatus of claim 220, wherein said conventional screen is a woven screen.

222. (New) The apparatus of claim 212, wherein said clothing is one of a screen, a felt with a foamed layer and a spectra membrane.

223. (New) The apparatus of claim 222, wherein said clothing is combined with at least one of a conventional screen and an anti-rewetting membrane.

224. (New) The apparatus of claim 223, wherein said conventional screen is a woven screen.

225. (New) The apparatus of claim 212, wherein at least one said suction roll has a diameter of between approximately 2 m and 3 m.

226. (New) The apparatus of claim 225, wherein at least one said suction roll comprises a plurality of said suction rolls.

227. (New) The apparatus of claim 226, wherein said diameter is approximately 2 m.

228. (New) The apparatus of claim 212, wherein a vacuum is applied to at least one said suction roll.

229. (New) The apparatus of claim 212, further including one of a siphon extractor and centrifugal force combined with at least one said suction roll for dewatering the fiber web.

230. (New) The apparatus of claim 212, further including an air knife combined with at least one said suction roll for dewatering the fiber web.

231. (New) The apparatus of claim 165, further including a plurality of rolls arranged in parallel bounding a pressure space pressurized by a compressed gas for driving out water from the fiber web, the fiber web and said imprinting band guided together through said pressure space at least once.

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232. (New) The apparatus of claim 231, further including a plurality of membranes, the fiber web guided together with and positioned between said plurality of membranes.

233. (New) The apparatus of claim 232, wherein said plurality of membranes includes an air distribution membrane and an anti-rewetting membrane.

234. (New) The apparatus of claim 165, wherein said imprinting membrane has at least one of a thickness between approximately 1 mm and 3 mm and an open area greater than approximately 50%.

235. (New) The apparatus of claim 234, wherein said open area is greater than approximately 60%.

236. (New) The apparatus of claim 234, wherein said open area is between approximately 70% and 75%.

237. (New) An apparatus for dewatering a fiber web, comprising: